Alarms structure in Ignition: VERY Preliminary studies

DAQ SC WG Group Meeting
04-March-2021
P. Mendez

Topics

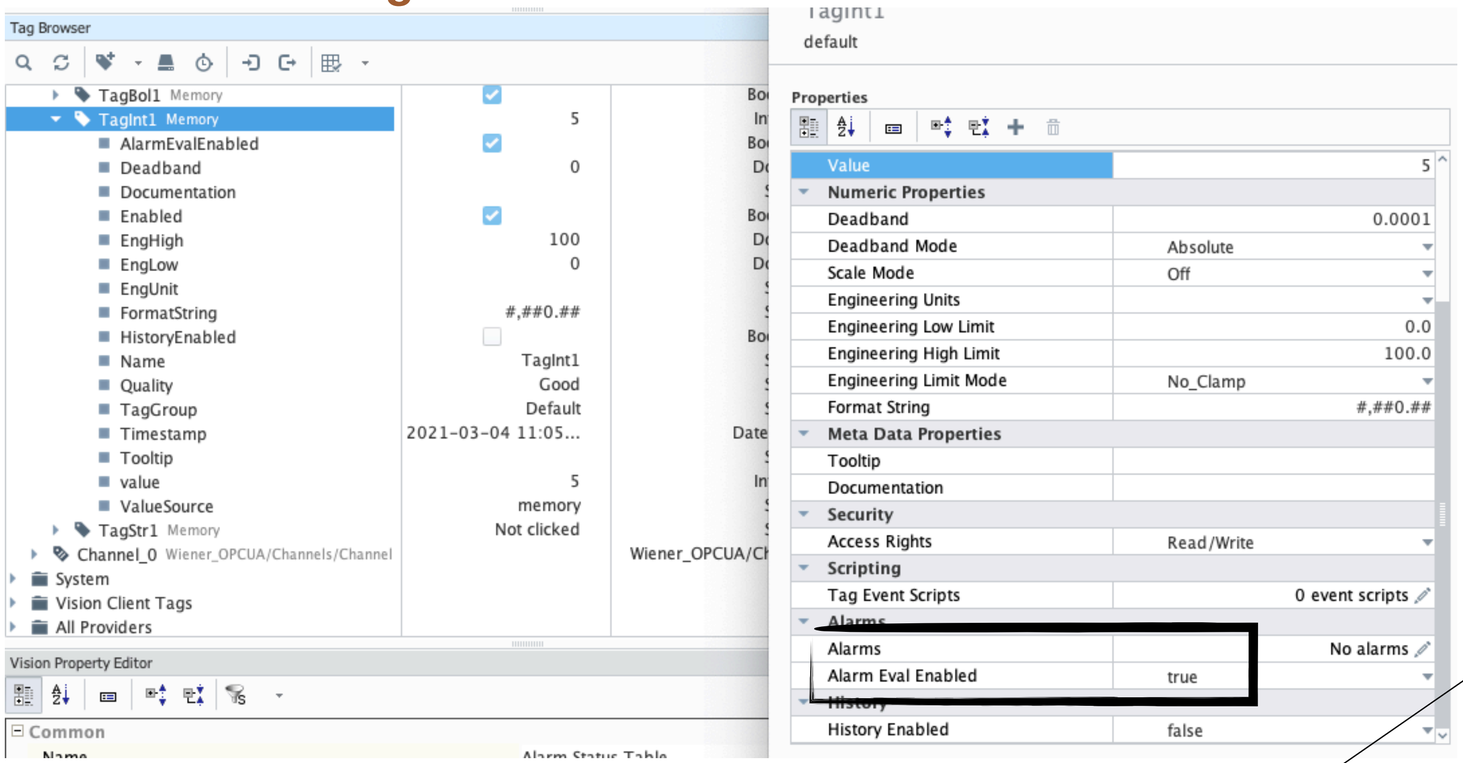
- Alarms setup in Ignition through data holders: Tags and UDTs
- The Alarm Journal
- Visualisation
- Alarm notification profiles

Principles of alarms in Ignition

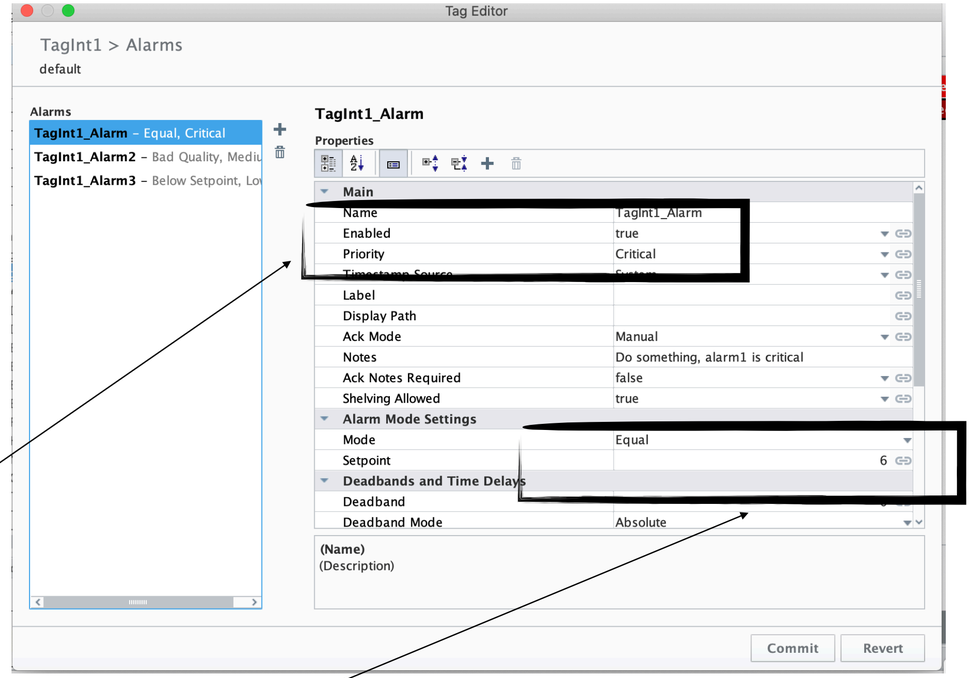
- Alarms are normally linked to data structures: Tags and UDTs and set through specific conditions
  - When the condition becomes true —> alarm is active
  - When it becomes false after having been true —> alarm is cleared
- Access to the specific alarms applications are provided for acknowledging
- Alarms have their own names, they can be grouped for searching and include specific settings and priorities
- You can also log them in the DB of the system
- Notifications profiles included as: email, sms and voice
- The system observes also system alarms (gateway values)

Setting up alarms through Tags: standard approach in Ignition

- **Ignition offers an automated way of monitoring tag values for specific conditions — Facility accesible from the tag edition**



Multiple alarms per Tag if needed



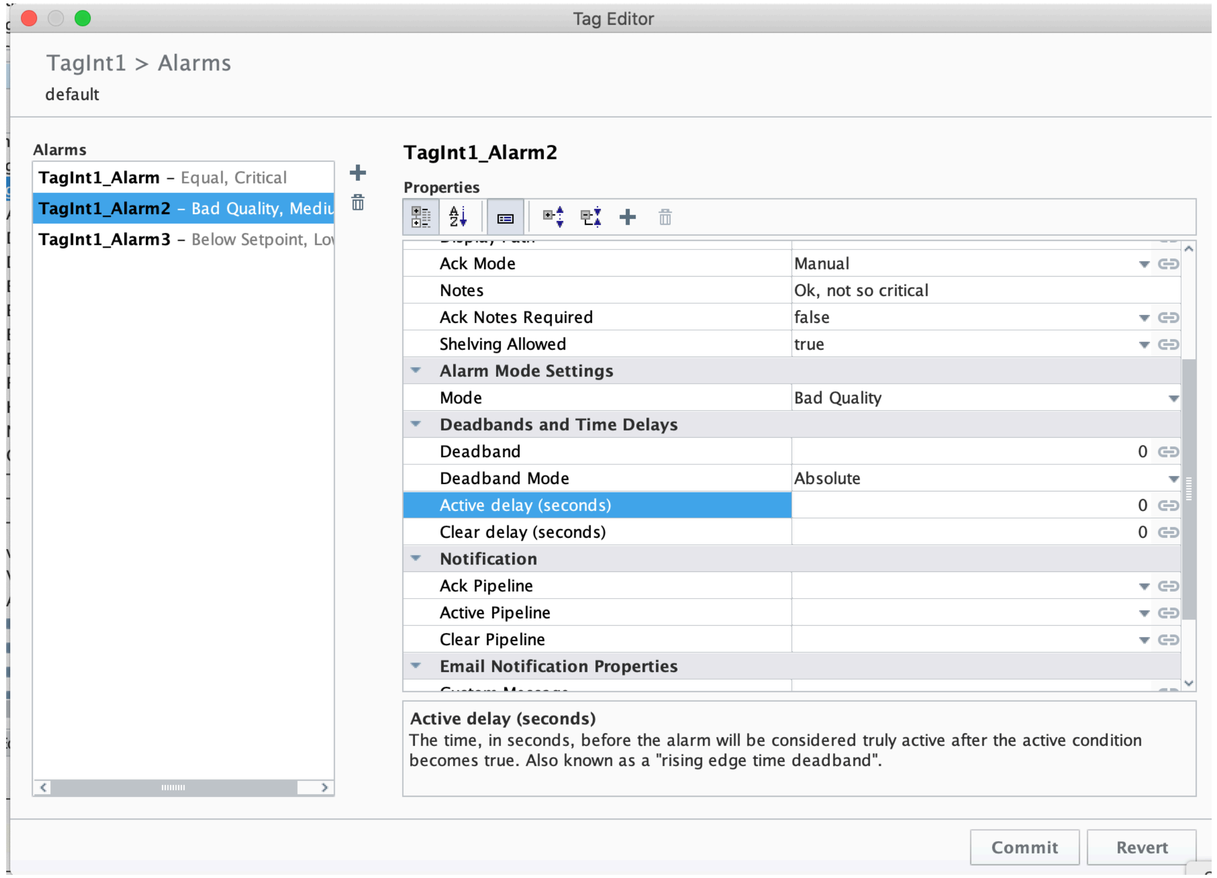
Enabled part is bindable
TAGS: (interesting to enable alarms only if machines are on)
EXPRESSIONS (interesting to enable alarms during a part of the day only)

In this example the setpoint is hardcoded.
But it can be dynamic by linking it to another tags or expressions

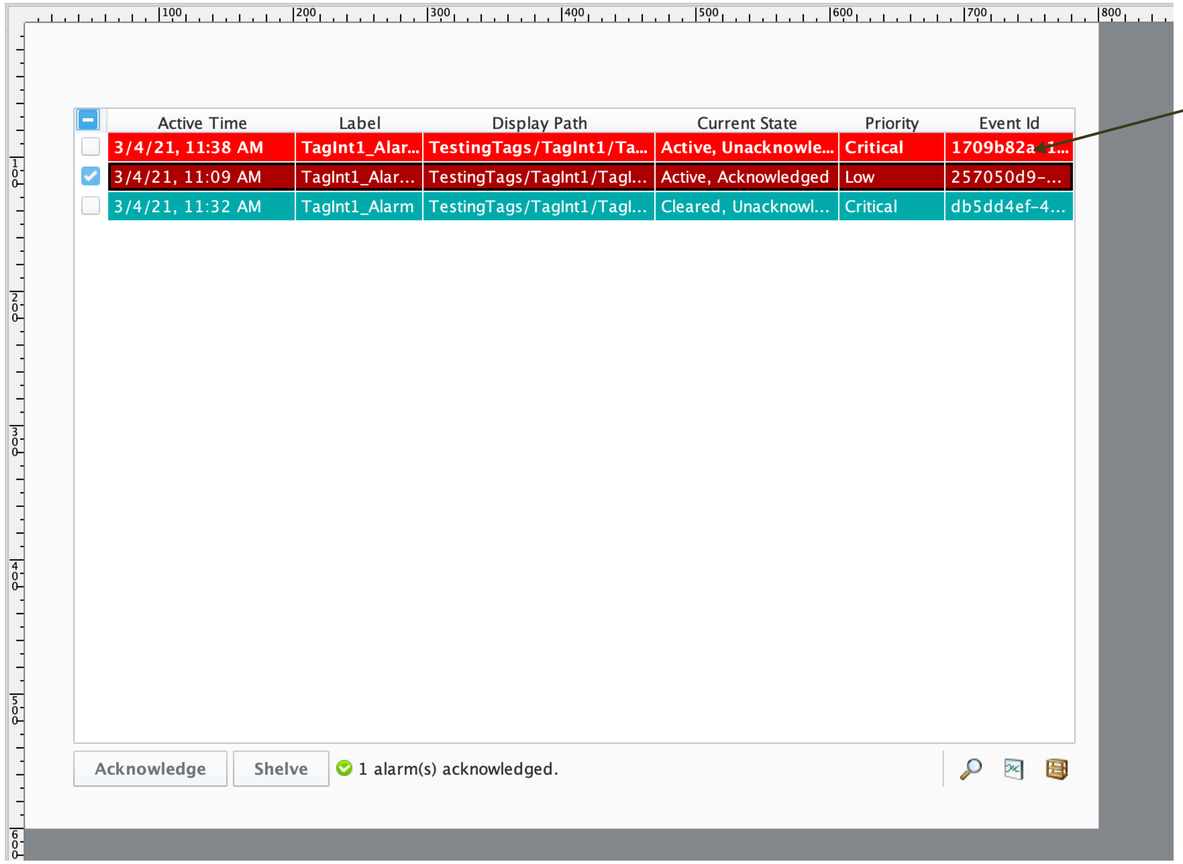
Active and clear delays

- Active delay is a time in seconds before the alarm will be considered truly active. Same meaning for cleaning

- If the condition alarm becomes false during the active delay, the alarm will not become active at the end of that delay



Alarms Operations



blinking till acknowledge

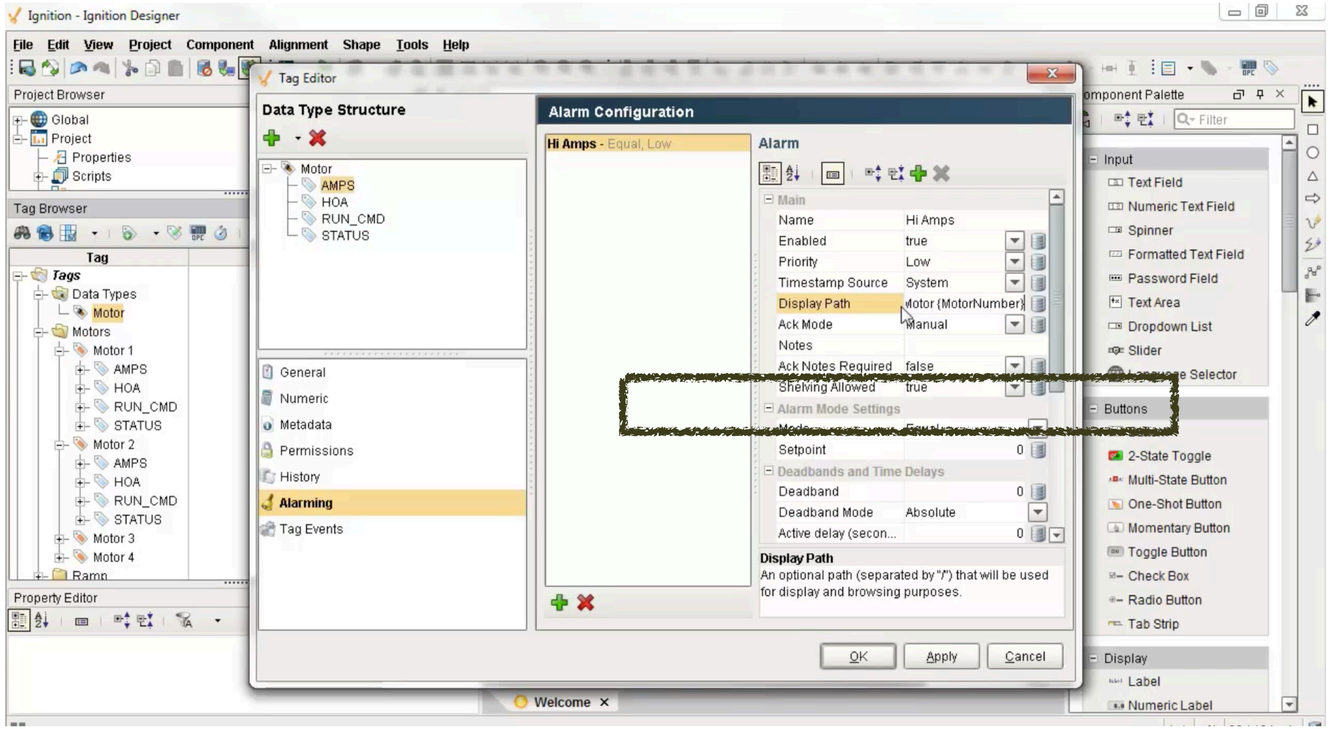
The Alarm Status Table is highly customizable and can be configured to show active, unacknowledged, cleared, and acknowledged alarms.

The visualisation table is part of the Ignition components accesible from the Designer

Shelving an alarm allows you to temporarily remove the alarm from the entire alarm system (not just the local client). This is configurable in minutes and when the time is over, the alarm will be re-evaluated

Definition of Alarms in UDTs

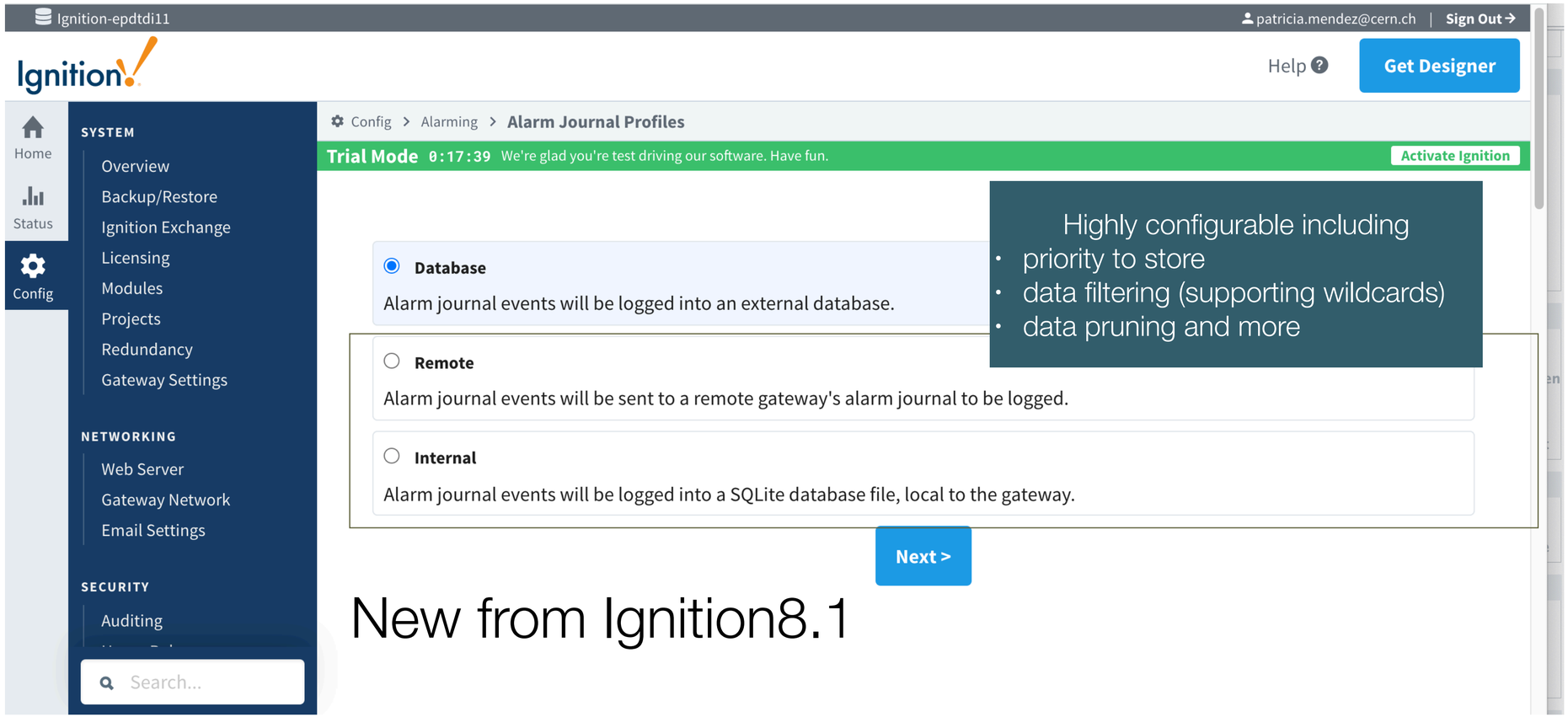
- Alarms take advantage of the UDT structure: definition-instances
  - Any alarm included at the definition level of the UDT will be inherited by the instances
  - Remember that in UDTs, the repetition path of the tags was based on a parametrisation included at the definition level —> This must be also observed when declaring alarms at the definition



Display path will be used by operators
to identify the tag affected
If not parametrised following the UDT definition,
the display path will be the same for all alarms

Alarm Journal

- An alarm journal stores alarm history in a database
- It stores basic alarm data, such as their source and timestamp, along with associated alarm data and the alarm's properties values at the time the event occurred
- The Journal facility is configured at the GATEWAY
- Visualisation of data provided through a specific component available in the Designer and called: “Alarm Journal Table”



New from Ignition8.1